The Location of Industry

by

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Location theory must be one of economic theory's least applied branches. The theoretical literature on industrial location is extensive, the empirical evidence sparse. There are many reasons for the gap between theory and evidence. It has proved difficult to measure the impact of location on costs and returns since data are not available on enterprises with similar production functions, but different locations. The responses of industrialists to questions about location decisions give unreliable results since sample surveys of industrialists are inevitably biased by the exclusion of those who considered but rejected a particular location or who failed because they made the wrong locational decisions. Surveys also suffer from rationalizations and *ex-post* explanations. Even if a location decision was based on a rumour or accident, an industrialist may well develop a more logical explanation afterwards. Surveys also obtain a picture of the *average* reason for investment over time and it is difficult to determine the predominant reason at any particular time. Without a time profile of the reasons for decisions, one cannot link them to causal factors which undoubtedly changed over time. Dynamic and accidental factors are especially important in location decisions and are difficult to analyze. For instance, the first factory in an industry may be located because an empty building exists. Later investors in the new industry may locate near the pioneer just because they draw assurance from his success. Both the initial accident and the later nonrational elements are unlikely to be uncovered by a survey or other techniques.

An analysis of location decisions by Pakistan's industrialists suffers from all the problems listed. Besides, data are less available and reliable than in some developed countries. Any conclusions, therefore, have to be treated as tentative, advanced only because empirical evidence is so thin in the field.

In several respects, however, an analysis of the location of industry in Pakistan is unusually rewarding. Since little industry existed before 1947, the

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reasons for location decisions are easier to trace than for countries with a long history of industrial development. Respondents' forgetfulness is less of a problem. Much of the new industry was "footloose"; that is, it could be located in a number of places with decisions not predetermined by the location of raw materials or markets. Many of the entrepreneurs, refugees from India or immigrants from Burma and East Africa, were footloose too. Profits were generally so high that practically no one went out of business, eliminating this element of possible bias.

This essay deals with the decision to locate industry in particular cities or local areas. It largely ignores location within a city or town and the effect of general provincial disparities in growth. The latter is discussed elsewhere [4, Pp. 19-24; 5 ; 6]. The analysis and conclusions draw heavily on a large-scale sample survey of industry (Survey) discussed elswehere [3] which describes the situation existing in 1958 at the end of the first great spurt of industrialization. The sample covers all manufacturing enterprises existing in 1958. Industrialists were asked about their original location decisions. In most cases, their answers were weighted by the capital of their enterprise.

The Survey uncovered a variety of related reasons for the concentration of industry in Karachi. It was the seat of the powerful Central Government, the city preferred by many industrialists for their home, the principal port and, therefore, the centre of the import trade on which many industrial empires were based; and it benefited from various agglomeration effects once it had become the first centre of industry. It is impossible to disentangle completely the various reasons for concentration in Karachi. There undoubtedly are also biases in the Survey results. The reasons given by a large number of industrialists, their personal preference for living in Karachi, may have been a rationalization in many cases. An attempt is nevertheless made below to separate the stated reasons for locational decisions and especially to examine the curious role of personal preference.

The margin of error in these interview results is undoubtedly large. However, any interviewer bias was against the importance of personal factors. The original coding classification made no provision for this category of response until the stress on personal preference in the answers forced a change. In any case, the margin of error in the data could be very large and personal preference would still appear a significant factor in location decisions.

THE ROLE OF PERSONAL OR GROUP PREFERENCE

Private industrialists controlling one-third of the "footloose" investment insisted that the location of their enterprise was the result of their decision on where they wanted to live. Since many industrialists were refugees from India or immigrants from elsewhere, they could settle almost anywhere with little attention to previous personal ties. Many of them preferred Karachi.

Personal preference for Karachi is odd for many reasons. The other large cities, Dacca and Lahore, had a more active cultural life and more pleasant surroundings. They suffered less from pressure on housing and other facilities. Developed land, power, water and transport facilities were particularly inadequate in Karachi, a city of less than half a million surrounded by desert.

For economic reasons as well, Lahore and Dacca had advantages. They had more industry in 1947 and investors could presumably benefit from a variety of external economies. (Industrial assets in Karachi in 1947 were about five crores[1], in Lahore about seven crores and in Dacca thirteen crores.) The latter were also better locations with respect to domestic raw materials and markets.

However, Lahore and Dacca had significant personal disadvantages for outsiders. They were dominated by "natives" with a developed social structure, a local language and culture. In Dacca, intellectuals, professionals and artists had a strong social position; in Lahore, landlords and civil servants were prominent. Neither seemed a congenial place to many of the immigrants. On the other hand, by 1951, over half of the Karachi population were refugees from India and a substantial proportion of the remaining inhabitants had moved to the city from other parts of Pakistan. The location of the Central Government in Karachi added to the cosmopolitan, amorphous character of the city. The businessman coming to Pakistan, therefore, felt he would be only one stranger among many, a member of a minority group in a city composed largely of minority groups. Some of the refugees spoke Gujrati as their first language, English as their second. Almost none spoke Bengali and few Punjabi, the languages of Dacca and Lahore. They much preferred a city where there would be others of their group, where there was no well-structured society and where their concern with trade and industry and with profits would not be frowned upon by polite society.

For some industries, to be sure, there was little or no choice. They had to be located near their raw materials (jute pressing, cotton ginning, sugar and cement mills) or near their markets (bakeries). Other firms existed at the time of Independence and were taken over by new owners. (The primary reason for the location decision was classed as "accident".) Government and semi-government agencies located their plants on the basis of various criteria.

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[1]One crore is ten million; one crore of rupees, or ten million rupees, are equivalent to about two million U.S. dollars at the official exchange rate since 1955.

The remaining private investment with a reasonable freedom of choice in locatin (less than two-thirds of total investment) can be considered reasonably "footloose". Of the investment which was footloose, about one-third was located primarily on the basis of personal preference. The textile industry is the prime example of a footloose industry; it was privately controlled, largely developed after Independence and not too closely tied to raw materials or markets. Personal preference was the primary reason given for locating over one-third of all textile investment. The result of interviews provides strong evidence that at least in the case of Pakistan where industry started almost *de novo*, the personal preference of industrialists for congenial surroundings played a major role in location decisions.

THE LOCATION OF GOVERNMENT

A second factor affecting the location of industry was the desirability of being close to government. Government decisions are crucial to the functioning of Pakistan's industry. High profit or ruin hinges on government decision on a firm's application for land or power, for permission to import machinery or float securities, for licences to import raw materials and spare parts, for protection from import competition and exemption from taxes. At least, until 1960's, industrialists' ability to deal with government was more important for their success than any other management function.

Dealing with government is facilitated by ready access to its officials. Letters, long-distance phone calls over poor connections, or the use of representatives are poor substitutes for face-to-face contact, especially in a society that places a high value on personal relationships. This is true even if illegal influence plays no part. Personal contact is essential if bribery or less blatant forms of influence are involved. It is impossible to use the mails effectively for such transactions.

In Pakistan, it was difficult to deal with government through a representative. There was no tradition of disinterested representation, and a representative was, in any case, unlikely to be effective. Ex-politicians, who often perform representative functions elsewhere, were not highly regarded by the civil servants who really made the decisions. There were no ex-civil servants available for hire as industrialists' representatives. To send anyone but the top man in an enterprise to represent it at court was to court disaster. Even the owner found it difficult to make the right contacts during the early years of industrialization since industrialists were considered socially inferior by the civil servants. The entrepreneur usually had to handle most of his business with government. His contacts were greatly facilitated if he lived where government officials did.

TABLE I

PRIMARY REASONS GIVEN FOR LOCATION OF INDUSTRY

(capital invested as of 1958)

Industry group[a]	Personal preference	Raw materials	Markets	Other industry[a]	Other business[b]	Location of government	Government policy	Facilities (power, transport)	Accident (existing plants)	Unknown	Total
	............*in crores of rupees*............										
Simple processing	1.0	41.0	27.0	1.7	0	0	0	3.0	2.9	1.7	78.4
Secondary processing	6.9	35.9	13.0	0	1.0	0	2.0	0.6	0.9	0	60.5
Textiles (cotton and wool)	46.9	37.5	8.5	0.7	4.4	11.2	15.9	3.5	1.6	11.7	141.9
Jute	1.4	26.8	0	0	0	0	3.7	2.9	0.5	0	35.5
Import processing (traditional)	5.7	1.6	3.1	11.9	6.5	0.4	1.2	2.6	0	0	33.2
Import processing (nontraditional)	5.5	6.8	2.2	5.0	0.9	0	0	1.2	0.9	0	22.5
Chemicals, cement, paper	3.7	41.5	2.5	0	0.6	0	0	0	1.6	2.9	52.9
Machinery	5.5	1.5	19.7	0.7	0.3	0	1.8	1.8	0	0	31.6
Total:	76.8	192.7	76.0	20.0	13.6	11.6	24.7	15.6	8.4	16.4	456.6

[a] For definitions and examples of industries in these categories, *see* Appendix.

[b] The location of other industrial plants or other business enterprises owned by the same family.

TABLE II

SECONDARY REASONS GIVEN FOR LOCATION OF INDUSTRY

(capital invested as of 1958)

Industry group	Personal preference	Raw materials	Markets	Other industry	Other business	Location of government	Government policy	Facilities	Accident	Total
	(............				*in crores of rupees*					............)
Simple processing	—	2.1	2.0	—	—	—	0.1	28.2	17.8	50.2
Secondary processing	0.1	10.4	3.5	1.3	7.0	0.5	—	8.1	0.4	31.3
Textiles (cotton and wool only)	15.3	5.3	2.3	5.2	4.3	9.8	6.4	17.7	—	66.3
Jute	0.5	—	5.8	2.6	4.1	—	—	3.3	3.7	20.0
Import processing (traditional)	0.6	—	2.8	—	0.4	—	—	5.7	0.1	9.6
Import processing (nontraditional)	0.6	—	7.5	—	—	2.1	0.1	3.1	0.9	14.3
Chemicals, cement, paper	0.6	1.4	—	—	—	2.0	—	4.5	—	8.5
Machinery, transport equipment	0.9	—	0.2	—	0.5	1.2	—	9.0	—	11.8
Total:	18.5	19.2	24.1	9.2	16.4	15.7	6.6	79.5	22.8	212.0

At the same time, he wanted to keep an eye on his enterprise. There were few he trusted to operate in his interest. The best solution was to locate the plant where the entrepreneur lived and to live where the government was located. This was a powerful reason for locating industrial plants in Karachi, the seat of the Central Government. To a lesser extent, this factor influenced decisions to locate in Dacca and Lahore, the provincial capitals.

Nevertheless, even for the footloose textile industry, Survey respondents reported that just 10 per cent of the investment was located primarily with reference to the location of government and for 15 per cent this was stated as either a primary or a secondary reason. However, this is a reason which would be particularly difficult to elicit in an interview. Industrialists would be reluctant to hint that the desire to influence the government affected their investment decisions. From discussions with industrialists in general and from the way in which Survey respondents reacted to this question, I believe that the location of government was a more powerful factor in location decisions than suggested by the tabulated responses.

SPAN OF CONTROL AND INTERNATIONAL TRADE

The entrepreneur's limited span of control also affected location decisions directly. Failure to delegate responsibility for management was largely due to lack of competent managers considered trustworthy. Until 1960's, the industrial empires willing to delegate to someone outside the family could be counted on the fingers of less than one hand. Even family members might be considered untrustworthy and, of course, they might be incompetent. Most entrepreneurs made major decisions themselves. A few delegated to competent brothers or sons who often lived in the same household. The individual or family could supervise enterprises much more readily if they were located in the same town.

Most traders were located in the port cities, and especially in Karachi. Karachi had the major port of the country and was the centre of import and cotton-export trades. The majority of industrialists were former traders, and especially importers. When they entered industry, they could most readily supervise their declining but still important trading enterprises and their still small industrial investment by locating industry in the same city. For this reason, Karachi and, to a lesser extent, East Pakistan's major port of Chittagong were preferred locations during the early period of industrialization.

Location in a port city had some further special advantages in the early stages of industrialization. Machinery, of course, was imported. The traders in the port cities saved on transport costs and were generally most familiar with foreign sources of supply. For industries processing primarily imported materials, location in a port also reduced costs and delivery time for imported inputs. The significance of this factor is suggested by the Survey results showing about 15 per cent of investment of "import processing" industries located primarily to be near their raw materials. Most probably, this investment was located at ports close to overseas sources for inputs.

In short, the port cities of Karachi and, to a lesser extent, Chittagong were chosen as the location for the first plant of many new industrialists because this is where they had their import or export business, because they could obtain imported machinery and raw materials more cheaply and readily there, and because businessmen in international trade were more familiar with foreign technology and suppliers.

To facilitate supervision, subsequent industrial plants were also located in the town where the initial industrial investment had been made. In the footloose industries, 16 per cent of private investment was located primarily to be near other business and industrial interests, and this proximity was cited as a primary or secondary reason for over 20 per cent of such investment.

THE EFFECT OF CONCENTRATION ON LOCATION

The early concentration of industrial development, as a result of the factors discussed above, favoured the location of later industrial investment in the same areas.

First, industrial concentrations exerted strong political pressure for additional public services. For instance, once industry was located in Karachi it created pressure for the expansion of the facilities it needed despite the high cost of such services as water, power and transport in that desert city. The influx of refugees into Karachi and the location of the Central Government there meant that strong pressures existed in any case. One estimate is that as a result of the combined pressure from the government, refugees and industry, over 50 per cent of government expenditure on water and public housing benefited that city in 1955-60, although it had only 2 per cent of the nation's total population [1]. The improvement of services in turn encouraged further industrial investment.

Second, the early concentration of industry led to a rapid increase in population in some cities. The markets for many industrial products were in the same cities. For instance, Karachi, where industry, government and trade all made for a rapid population growth, had 16 per cent of the whole urban population in Pakistan by the late 1950's.

Third, establishment of industry created a congenial personal climate for other industrialists. They found kindred spirits to damn the government and exert pressure on it; they found others with a similar social background and interests who were congenial companions and suitable husbands for their daughters.

Finally, inertia and ignorance undoubtedly played a role in encouraging industrial concentration. It became well known that the textile industry was concentrated in a few cities. New investors, knowing little about the industry, tended to assume that their predecessors had chosen their location for good reasons and that risk would be reduced by following in the original entrepreneurs' footsteps.

EXTERNAL ECONOMIES AND DISECONOMIES

A number of reasons have been suggested above for concentration of industry, but strangely enough no mention has been made so far of external economies often considered the major reason for concentration.

There are a number of definitions of external economies, some even including the effect of proximity to government. A narrow definition is used here: the effect of investment in one firm and industry in reducing the costs of other firms and industries. External economies so defined undoubtedly played a role in industrial concentration in Pakistan. Repair and service firms were better developed in a few cities where a particular industry, or industry in general, was concentrated. The stock exchange, the commodity exchanges, banking, advertising and insurance facilities were most highly developed in Karachi. The new investor in a particular industry had a better chance to bid away skilled workers and technicians from other plants if he located in a city with a substantial pool of labour, so that he could pirate a few workers from a variety of plants. To set up an isolated textile mill had obvious disadvantages in terms of the availability of transport, power, repair facilities, skilled labour, professionals and managers. It is clear from Table III that the location of particular industry groups and of industry as a whole was highly concentrated. *A priori*, it is possible that this concentration was influenced by external economies.

However, the discussion of external economies in the literature on economic development often neglects accompanying external diseconomies. As industry grows rapidly in a location, workers' transport costs will rise leading to higher wages. The rate of industrial growth may also outstrip the rate of growth in facilities (*e.g.*, power, transport, communications, workers' housing). Gains from the economies of scale of facilities may then be more than outweighed by losses due to their inadequate total supply.

There is some evidence on the existence of external diseconomies in Pakistan. Seventy-eight per cent of Karachi firms operated below capacity (defined as 900 shift-days) in 1958 compared to 54 per cent in the rest of the country. In the textile industry, only half of Karachi firms operated 900 shift-days or

TABLE III

LOCATION OF CAPITAL BY INDUSTRY GROUP, 1958

	Simple processing	Secondary processing	Textiles (excluding jute, silk)	Jute	Import processing (traditional)	Import processing (nontraditional)	Chemicals, cement, paper	Machinery, instruments	All industries
	(in crores of rupees)								
1. Karachi	2.4	14.5	56.5	0	8.9	10.7	10.0	11.5	114.6
2. Hyderabad area	3.2	7.8	3.4	0	11.5	0	4.5	0	30.4
3. Other "Sind"	19.6	0.3	3.9	0	0	0	0	0	23.7
4. Lahore, Sialkot, Gujrat area	0.4	2.7	2.7	0	5.1	3.3	2.3	13.7	30.2
5. Lyallpur	0	0	12.4	0	1.1	0	0	0.2	13.7
6. Other "Punjab"	4.8	3.6	37.0	0	1.3	2.5	16.0	9.5	65.6
7. "Frontier Province"	0.5	19.1	2.6	0	0	0	6.5	1.8	30.5
TOTAL WEST (excluding Karachi)	28.5	33.7	62.0	0	19.0	5.8	29.3	16.0	194.0
8. Dacca, Narayanganj area	28.0	2.5	18.0	21.3	5.4	1.0	0.1	2.9	79.2
9. Khulna	0.2	1.1	0	11.2	0	0	0	0	12.4
10. Chittagong	3.6	1.5	2.3	3.1	0	0	11.7	0.5	22.7
11. Sylhet and Northern area	15.8	4.7	0.8	0	0	5.0	1.8	0.7	28.7
12. Other	0.2	2.8	2.2	0	0	0	0	0	5.1
TOTAL EAST	47.7	12.6	23.3	35.6	5.4	6.0	15.4	4.1	148.0
TOTAL PAKISTAN	78.5	60.6	141.9	35.5	33.2	22.5	52.9	31.6	456.6

Note: Discrepancies are due to rounding. For definition and composition of industry groups, *see* Appendix. *Source*: Survey.

more while 85 per cent achieved this rate in the rest of West Pakistan. The reasons cited for below-capacity operation by many Karachi firms were lack of labour or of skilled labour. Khulna in East Pakistan was an extreme example of rapid industrial development. A small town before Partition, known as a small port and a notorious recreation centre for tired Calcutta businessmen, it had no industry to speak of. After Partition, one-third of all investment in the jute industry was located in Khulna. With rapid expansion, housing and health and recreation facilities for workers became completely inadequate. A result was labour strife which produced serious inefficiencies and losses.

Comparing labour costs at different locations yields further evidence on external diseconomies. Textile firms in Karachi paid higher wages, had higher output per worker and were more capital intensive than those in the rest of West Pakistan; West Pakistan firms in turn were higher than those in the East in all these respects. One can only speculate on the reasons. It may be that the higher cost of living in Karachi, due to the cost of commuting and inadequate facilities, required higher wages to attract workers. The higher wages in turn may have caused industrialists to use more capital-intensive methods of production[2].

TABLE IV

LABOUR PRODUCTIVITY, WAGES AND CAPITAL INTENSITY, 1958

	Karachi	West Pakistan		East Pakistan
		Lahore	Lyallpur	
	(......*thousands of rupees*......)			
Average annual wage per worker — all industries	1.47	1.27	0.97	0.96 (Dacca)
Output per worker in textiles	8.96	7.04		5.58
Capital per worker in textiles	10.72	8.28		6.92

Whether this chain of causalty is correct or not, the very crude comparison suggests that wages, output per worker and capital per worker differed by

[2]An alternative interpretation that economies existed but labour captured them via higher wages is logically possible although highly unlikely. No effective trade unions existed and a constantly replenished pool of unemployed in all cities kept real wages low and probably unchanged for over a decade.

similar proportions in three areas. None of these locations seems to have had much of an advantage over the others in terms of output or value added per rupee of wages paid.

Less crude attempts to measure the economic advantages of various locations yield similarly inconclusive results[3].

For 43 cotton textile firms, there is no statistically significant relation (for 1958) between location and reported profits per unit of capital. While Karachi textile firms appear to use more capital and to have a higher value added per labourer than do firms in the rest of West and East Pakistan (these ratios do not seem to differ significantly between West Pakistan and East Pakistan firms), statistical estimation of production functions is not inconsistent with the hypothesis that the higher labour productivity observed in Karachi textile firms is due, in large part, to adjustments in the capital-labour ratio as the result of different factor price ratios. They do not indicate any inherent difference in efficiency of production due to location.

In short, Pakistan provides no clear evidence for the widely used argument that external economies are of great importance in explaining concentration of industry in a single city. It may be that the limited importance of external economies is due to the importance of the accompanying external diseconomies, though such a conclusion is even more highly speculative.

GOVERNMENT POLICY

One might expect that government policies designed to foster dispersion of industry substantially affected location decisions. Beginning in the middle of 1950's, policies were designed especially to discourage industrial investment in Karachi. For a period, new industrial investment in Karachi was prohibited. On the other hand, special encouragement was given to industry locating in East Pakistan and the less developed areas of West Pakistan.

This policy found an expression in longer profit-tax exemptions in the favoured areas (six years' tax exemption in the less developed, compared to four years' for the developed). But with high rates of profit and low effective tax rates because of evasion, tax incentives made little impact.

More direct measures to implement location policies, primarily by granting permission to invest more readily for applicants from the less developed areas, also seem to have had little or no effect at least until 1960's. When investors were faced with difficulties in locating new plants in Karachi, the first reaction was to attempt to obtain an individual exemption. If this proved impossible, investors sometimes conformed to the letter of the policy, establishing their

[3]For details, *see* [6].

plant in the nearest suitable city — Hyderabad, two hours away by car — which meant that they could still live in Karachi. Most of the firms which indicated that they had chosen their location primarily because of government policy (less than 10 per cent of footloose investment) were firms located in Hyderabad.

The failure of government location policy was largely due to its equivocal execution. In theory, investment in East Pakistan was favoured and investment in Karachi strongly discouraged. In practice, industrialists found that they were more successful in extracting favours from the government if they could exert personal influence in Karachi. Reference to an investor's compliance with the stated policy of favouring other areas might elicit a compliment rather than an import licence.

In effect, government location policies did not exert pressure sufficient to overcome industrialists' strong location preferences. Industrialists simply regarded government location policies as just another hurdle to be overcome. It was only in 1960's that one began to encounter an occasional industrialist who had found it easier to get permission for imported machinery or raw materials for East Pakistan and who had decided to establish part of the family and of his investment in that province. In general, however, government policy to discourage concentration had little effect.

Industrial Estates—Facilities

Yet, one other aspect of government policy influencing location decisions may be considered. "Industrial Trading Estates", areas developed for industry, were set up in or near Karachi, Hyderabad and Dacca, beginning in 1950. Government provided power, water, sewage, road, rail connections and other facilities. Land could be rented for industrial use. The attraction of these areas is obvious. Normally, required facilities had to be provided by the industrial firm at great cost or each service had to be painfully extracted from a flock of government agencies. Locating in an industrial estate not only meant a saving in investment and operating cost, it meant, above all, a saving in management effort.

About 40 per cent of all industrial investment in 1959 was located in the four trading estates which then existed. Of the footloose investment, almost two-thirds of all investment in Pakistan settled in these estates. The Karachi Estates were developed first and were the best equipped. About 85 per cent of all investment in Karachi and almost one-third of *all* the footloose investment in the country was located in the two Karachi Estates. These areas on the outskirts of Karachi must represent relatively one of the greatest concentrations of industry anywhere.

Yet, the Trading Estates do *not* seem to have been important in the decision to locate in a particular city. For only 2 per cent of investment in Trading

Estates were facilities mentioned as the primary reason for locating a plant in a particular city. The availability of the facilities in Trading Estates and outside was, however, mentioned as the most important secondary reason for location decisions, cited by 40 per cent of all industrialists who indicated a secondary reason. What seems to have happened is that industrialists decided on Karachi or Dacca to be near government and for personal and other reasons, *then* looked for the best facilities in the area and found them in the Industrial Trading Estates.

Disaggregating Location Decisions

Several aspects of the earlier discussion can be expanded by disaggregating the Survey results. Firms whose location is fixed, that are in industries closely tied to either raw materials or markets can be distinguished from those in largely footloose industries[4]. Public and private enterprises can be distinguished, since the former are subject to more government direction. Finally, firms founded before Independence can be separated from those set up immediately thereafter (1947-52) when imports were not severely restricted, and those set up during the period of increasing control (1953-59).

Not surprisingly, given the definition, firms in fixed industries, whether public or private, are located overwhelmingly with reference to raw materials or markets. The location of footloose public firms was primarily influenced by government location policy.

TABLE V

PRIMARY REASON GIVEN FOR LOCATION BY 145 FIRMS

(capital investment as of 1958)

Category	Personal preference	Raw materials	Markets	Govt. policy	Other and unknown	Total
	(....................	.......*rounded*	*per cent*.......		....................)	
Public footloose*	0	3	1	78	17.5	99.5
Public fixed*	0	54	42	4	0	100
Private fixed	8.5	57	21	3	11	100.5

*See footnote 4.

[4]Industry groups 1, 2, 4, 7 and 8 were put in the fixed and industry groups 3, 5 and 6 in the footloose category. (*See* Appendix for definition of industry groups.)

More interesting is the time profile of location decisions by private firms in footloose industries. Personal or group preference was especially important during the early period after Independence when many refugees were setting up their industrial firms in Karachi. Beginning in 1953, when the shortage of foreign exchange made government-issued import licences crucial, the location of the government and the government policy became more important.

TABLE VI

PRIMARY REASON GIVEN FOR LOCATION DECISIONS OF 110 PRIVATE FIRMS IN FOOTLOOSE* INDUSTRIES BY PERIODS

(capital invested as of 1958)

Reasons given	Periods during which initial investment made			Total
	1938-47	1948-52	1953-59	
	(*..................rounded per cent................*)			
Personal preference	10	21	1.5	32.5
Location of govt. policy; govt. facilities	6	1	5	12
Raw materials; markets; accident	11	14	8	33
Other business or industry	8	8	0	16
Total:	35	44	14.5	93.5[a]

**See* footnote 4.

[a]The reason for the decisions of the remaining firms is not known.

Over the three time periods combined, the aspects of location decisions under government control — that is the location of government, government policy, and the provision of facilities by government — seem to have played a relatively minor role. However, it should again be emphasized that the responses undoubtedly understated the influence of proximity to government. It is also notable that even for "footloose" industries, influences not realy subject to policy — the location of raw materials and market and accident — played a very important role. One aspect of agglomerative effects — the location of other business or industrial firms owned by the same group — was of some significance.

The secondary reason given by private firms in footloose industries adds one interesting dimension. Half of them listed the availability of facilities with most of them set up in the 1948-52 period, then facilities were particularly inadequate. Thirteen per cent listed the location of government and 7 per cent government policies suggesting that government did exercise some influence even if its location policies and programmes were not the primary reason for locational decisions.

SOME CONCLUSIONS

The factors that influence location decisions can be seen with some clarity in Pakistan. There was little industry so that location decisions were not constrained by past decisions. The overwhelming majority of entrepreneurs were displaced persons so that even their personal decision on where to live was not determined by family or other historical ties. Finally, a large proportion of industrial investment, notably in textiles, was in industries whose location is not circumscribed by access to raw materials or product markets. Governments in other countries, interested in influencing industrial location decisions, may find the Pakistan experience useful, since it presents a less-muddied picture than countries with a long history of industrial development.

The personal preference of entrepreneurs for a congenial residential environment, combined with the necessity of living close to the enterprise since delegation of authority was considered difficult, seems to have played a significant role in determining industrial location. The location of government was another important factor influencing industrial location, it was suggested, though this conclusion was not supported by Survey results. Government in Pakistan had an unusual degree of control over private actions which made it more important for individuals to be in the capital than would be the case in other countries. Later investment was pulled to the location where initial industrial development had taken place by the desire of industrialists to live where there are other industrialists; the tendency of government to improve overhead facilities where there is pressure from established industry; the concentration of consumers resulting from the concentration of industry; the tendency to invest where other have been successful; and the strong pressure to locate all business and industry under the same control in the same place for ease of supervision.

The evidence on the significance of external economies is far from clearcut. Undoubtedly, some external economies developed in a limited number of cities and were important reasons for a further concentration of industry in these locations. But there is some slight evidence that external diseconomies were important as well, at least in Karachi where industrial development was most rapid. The very rapidity of industrial growth in Karachi probably contributed to higher costs of labour, power and other facilities. In any case, there is no evidence that external economies played the important role sometimes assigned to them in explaining concentration in a single city.

Government policy for dispersion had little effect. Stated government policy had to contend with actual government practice which favoured those located close to the seat of government. Direct controls on location were sometimes ignored, sometimes evaded by complying with the minimum letter of the law.

Industrial trading estates were a great deal of help in providing overhead facilities. They saved capital and reduced operating costs for the industrialist. Above all, they saved management effort. Yet they seem not to have been a significant influence in choosing locations among cities, but only within cities.

The net result of all the tendencies was a high degree of concentration. Industries not tied to raw materials or markets and not located by government fiat were heavily concentrated, with one-third of all such industrial investment located in Karachi and another one-sixth in Dacca.

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Appendix

DEFINITIONS AND COMPONENTS OF INDUSTRY GROUPS

Industry group	*Description*	*Examples of industries included*
1. Simple processing	Raw materials domestic Simple technology Capital/workers $\leqq$ Rs.5000 Traditional in Pakistan	Cotton ginning Jute baling Grain milling Tanning
2. Secondary processing (excludes textiles)	Raw materials largely domestic Technology moderately complex Capital/worker Rs. 5,000-11,000 Nontraditional in Pakistan except small units	Cigarettes Sugar refining Edible oils Matches Tobacco manufacture Shoes Glass
3. Textiles (cotton and wool only)	Raw materials largely domestic Technology not too complex	Dyeing, printing Knitting Cotton spinning and weaving Wool weaving
4. Jute	Same as 3, but limited to East Pakistan	Jute
5. Import processing (traditional)	Raw materials substantially imported Technology not too complex Capital/worker $\leqq$ Rs.3,500 Small units traditional in area or for Muslims	Printing Utensils, hardware Tools, cutlery, arms Artificial fibre weaving Clothes

6. Import processing (nontraditional)	Raw materials substantially imported Technology not too complex Capital/worker ≦ Rs.4,500 Not traditional in area or for Muslims	Tyres, tubes, rubber prods. Metal and metal products Cosmetics, soaps Plastic products Miscellaneous manf.
7. Chemicals, cement, paper	Raw materials generally domestic Technology complex High capital/worker Rs. 4,000-47,000 Not previously in existence in area of Pakistan	Paper and products Fertilizer Chemicals, paints Medicines Cement and products
8. Machinery	Raw materials almost entirely imported Technology complex (though capital requirement not always great) Small units traditional in many lines, large units nonexistent	Engines and turbines Pumps and compressors Electrical equipment Machinery Communications equipment Ships, vehicles, bicycles Photographic, optical Scientific equipment